

Fact Sheet



For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-00300036-2006**

Application Received: **June 16, 2006**

Plant Identification Number: **003-00036**

Permittee: **LCS Services, Inc.**

Facility Name: **North Mountain Sanitary Landfill**

Mailing Address: **P. O. Box 1070, Hedgesville, WV 25427**

Physical Location:

Hedgesville, Berkeley County, West Virginia

UTM Coordinates:

243.35 km Easting • 4,384.46 km Northing • Zone 18

Directions:

From I-81, take exit for State Route 9 (Berkeley Springs/Hedgesville); Go approximately 6 miles to Hedgesville and turn right onto County Route 901; Go approximately 1 mile, and take a left onto County Route 3/2 (Allensville Road); Go approximately 0.8 miles on Allensville Road and landfill entrance is on left.

Facility Description

SIC Code – 4953. The landfill includes approximately 330 acres, of which 68 acres are permitted for landfill disposal operations and support facilities. The facility began landfilling operations in January 1991 and based on an annual disposal rate of 120,000 tons, is expected to reach capacity in 2025. The landfill also has above ground tanks which are used for leachate treatment and storage.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Criteria Pollutants	Potential Emissions	2004 Actual Emissions
Carbon Monoxide (CO)	134.23	2.6
Nitrogen Oxides (NO _x)	7.16	<0.1
Particulate Matter (PM ₁₀)	24.23	2.7
Total Particulate Matter (TSP)	101.82	11.3
Sulfur Dioxide (SO ₂)	3.00	<0.1
Volatile Organic Compounds (VOC)	13.62	6.3
<i>PM₁₀ is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2004 Actual Emissions
Acrylonitrile	0.25	0.21
Benzene	0.11	0.10
Carbon disulfide	0.03	0.03
Carbon tetrachloride	0.40	0.40
Carbonyl sulfide	0.02	0.02
Chlorobenzene	0.02	0.02
Chloroethane	0.06	0.05
Chloroform	<0.01	<0.01
Chloromethane	0.05	0.04
Dichlorobenzene	0.02	0.02
1,1-Dichloroethane	0.17	0.16
1,1-Dichloroethene	0.01	0.01
1,2-Dichloroethane	0.03	0.03
Dichloromethane	0.87	0.78
1,2-Dichloropropane	0.02	0.01
Ethylbenzene	0.36	0.32
Ethylene Dibromide	<0.01	<0.01
Hexane	0.42	0.37
Hydrogen Chloride	4.12	<0.01
Mercury	<0.01	<0.01
Methyl ethyl ketone	0.37	0.33
Methyl isobutyl ketone	0.14	0.12

Perchloroethylene	0.45	0.40
Toluene	2.64	2.35
1,1,2,2-Tetrachloroethane	0.14	0.12
1,1,1-Trichloroethane	0.05	0.04
1,1,2-Trichloroethane	<0.01	<0.01
Trichloroethene	0.27	0.24
Vinyl chloride	0.33	0.30
Xylene	0.94	0.83

Some of the above HAPs may be counted as PM or VOCs.

Non-methane organic compounds (NMOC) – The current emission rate estimate (calculated for year 2005) is 7.8 Mg/yr. The projected closure year is 2051 with a projected maximum NMOC emission rate estimate of 20.2 Mg/yr. The NMOC emission rate estimates were calculated using EPA's Landfill Gas Emissions Model (LandGEM) software. The values used for k and L_o were 0.050 year⁻¹ and 170 m³/Mg respectively. The site specific NMOC concentration used in the model was 155 ppmv, as determined by Tier 2 testing in April 2002.

Title V Program Applicability Basis

This facility has the potential to emit over 100 tons per year of Carbon Monoxide, and has a design capacity of 6.7 million megagrams. Due to this facility's potential to emit over 100 tons per year of a criteria pollutant, and a design capacity over 2.5 million megagrams, the North Mountain Sanitary Landfill is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:

45CSR6	To Prevent And Control Air Pollution From Combustion of Refuse
45CSR11	Standby plans for emergency episodes.
45CSR13	Permits for Construction, Modification, Relocation and Operation of Stationary Sources
45CSR17	To Prevent And Control Particulate Matter Air Pollution From Materials Handling, Preparation, Storage And Other Sources Of Fugitive Particulate Matter
45CSR23	To Prevent And Control Emissions From Municipal Solid Waste Landfills
WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting
45CSR30	Operating permit requirement.
40 C.F.R. Part 60, Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills
40 C.F.R. Part 61	Asbestos inspection and removal
40 C.F.R. Part 82, Subpart F	Ozone depleting substances

State Only:
45CSR4

No objectionable odors.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR15, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-2590	10/20/2004	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

The following paragraphs summarize the applicable requirements to this facility with the exception of those requirements which are merely boilerplate language.

1. 45CSR6 - *To Prevent And Control Air Pollution From Combustion of Refuse.*

- This rule defines the flare as an incinerator and sets the following limits:
 - The particulate matter limit for the flare is calculated to be 17.70 lb/hr as described herein;

The particulate matter emission limit from each flare is determined by the following formula:

$$\text{PM Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

Where: $F = 5.43$ (from 45CSR§6-4.1)

Incinerator Capacity = 3.26 tons/hr (*see below*)

The maximum Volumetric design flow for the flare is 1,362 SCFM. To convert volumetric flow to mass flow, the density of the landfill gas is needed. The landfill gas is assumed to be 50% methane and 50% carbon dioxide. Using 0.67908 kg/m^3 (@ 60 °F & 14.7 psia) for the density of Methane and 1.8696 kg/m^3 (@ 60 °F & 14.7 psia) for the density of Carbon Monoxide, the estimated density of the landfill gas is 1.27434 kg/m^3 . Using *Katmar Software's* "Uconeer - Units Conversion for Engineers" program, the volumetric flow rate of 1,362 SCFM is converted to a mass flow rate of 3.26 tons/hr.

However, since the facility has a more stringent particulate matter limit of 0.69 lbs/hr from the R13 permit Condition A.4, then this limit will be used in the Title V Permit. Compliance with the R13 limit will show compliance with the limit derived from Rule 6.

- The visible emission limit from each flare is 20% opacity with the exception to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up.
 - This rule also prohibits from the flare, the emission of particles of unburned or partially burned refuse or ash which are large enough to be individually distinguished in the open air. The rule requires the flare, including all associated equipment and grounds, be designed, operated and maintained so as to prevent the emission of objectionable odors, and also would require an NSR permit for the construction, modification or relocation of any incinerator if emissions exceeded R13 trigger thresholds.
 - Compliance will be demonstrated through monthly visible emission checks and record keeping.
2. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources*
The R13-2590 established limits for a flare that was installed at the landfill. Condition 4.1.4 establishes limits for the criteria pollutants. Condition 4.1.2 requires the facility to operate the flare in accordance with the manufacturer's specifications. Condition 4.1.3 limits the exit gas velocity of the flare to get proper combustion, while Condition 4.1.5 limits the destruction efficiency of the flare. Condition 4.1.6 limits the amount of landfill gas that is allowed to be flared per hour/year.
- Condition 4.4.3 requires the facility to keep records of the amount of landfill gas that is fed into the flare. This will directly show compliance with Condition 4.1.6, and indirectly show compliance with Condition 4.1.3, 4.1.4, and 4.1.5 in that the flare is able to combust the landfill gas properly as long as it isn't overloaded by volume.
- The flare is not required to show compliance with Subpart WWW. It is used voluntarily by the facility in order to improve odor control. However, when the active gas collection system with control flare is operating, it must be used under the conditions as specified above. If construction, modification, or relocation of the flare exceeds R13 Permit trigger thresholds, then the facility must obtain a R13 Permit or Modification that includes the flare via the requirements of R13 and 45CSR§6-6.1.
3. 45CSR17 - *To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter.*
- This rule sets a standard for fugitive particulate matter, which is not to be discharged beyond the facility boundary lines which causes statutory air pollution.
 - Compliance with this standard will be met by the facility submitting a control plan if the Director finds the facility in violation of this rule.
4. 40 C.F.R. Part 60 Subpart WWW - *Standards of Performance for Municipal Solid Waste Landfills*, and 45CSR23 - *To Prevent and Control Emissions from Municipal Solid Waste Landfills*
- These rules set standards for design capacity and nonmethane organic compounds (NMOC). To demonstrate compliance with these rules, the facility is required to submit an amended design capacity report to the Director upon any change that increases the permitted area or depth, or change in operating procedures, or other means which results in an increase in the maximum design capacity. Also, the facility will maintain records of all emission data and operating parameters necessary to show compliance. If necessary the facility will demonstrate compliance by submitting a landfill gas collection and control system design plan. The facility will also demonstrate compliance by submitting an initial NMOC emission report, annual NMOC emission report, 5-year NMOC report, Revision of 5-year NMOC report, and/or closure report, where applicable.

- The facility submitted an initial design capacity report in July 1998 as required by 40 CFR §60.757(a) and an amended design capacity in May 2002 as required by the current Title V permit. Since the design capacity is greater than 2.5 Mg, amended design capacity reports under 40 CFR §60.657(a)(3) are not required. Therefore, the current design capacity and the requirement to report an amended design capacity will not be included in the “Source-Specific Requirement” section of the renewal Title V permit.
- The facility submitted the initial NMOC emission rate report in July 1998 and subsequent annual and 5-year NMOC emission rate reports as required by 40 CFR §60.757(b).

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

40 CFR 64	The facility does not have a pollutant specific emissions unit with a control device to meet an applicable standard or limit. Therefore, the facility is not subject to the Compliance Assurance Monitoring (CAM) rule.
40 CFR §60.657(a)(3)	The design capacity of this facility is greater than 2.5 million megagrams and 2.5 million cubic meters. Therefore, amended design capacity reports are not required.
45 CSR 27	Although this facility does emit small amounts of Toxic Air Pollutants, none have the potential to emit in greater quantities than the benchmark values listed in 45CSR27 Table A.

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: September 19, 2006

Ending Date: October 19, 2006

All written comments should be addressed to the following individual and office:

Mike Egnor
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Mike Egnor
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1208 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

There were comments received from the consultant of the Permittee on October 18, 2006. The majority of the comments were made in order to clarify the requirements of Subpart WWW, for landfills, to this specific facility. Conditions that were changed include 4.1.9, 4.4.3, 4.5.1, and 4.5.2.